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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/599,057 | 06/21/2000 | Bong-Woo Lee | 39647/DBP/Y35 | 6284 |

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EXAMINER

GUHARAY, KARABI

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2879

DATE MAILED: 07/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/599,057

Applicant(s)

LEE ET AL.

Examiner

Karabi Guharay

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4. 6) ☐ Other: _____

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Amendment A, filed on 18 March 2003 has been considered and entered.

Further supplemental Amendment B, filed on 01 May 2003 has been entered.

Corrected Fig 1 and Fig 2 have been considered and approved.

Amendments of specification as well as claims overcome the rejection of claims under 35 U. S.C. 112 first and second paragraph.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites that $25\text{mm} < r1 < 5\text{mm}$. Value of $r1$ cannot be less than 5mm while being greater than 25mm, thus it is not clear what is the range of value for $r1$. Thus scope of the claim cannot be ascertained.

For the purpose of further examination, it is understood that upper range of $r1$ is 50mm, in the light of specification.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

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only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Yokata et al.(US 6268692).

Regarding claim 1, Yokata et al. disclose a cathode ray tube (Fig 1) comprising a panel (12), a phosphor screen (17) being arranged on an inner surface of the panel, a funnel (13) having a deflection yoke (20) on the outer periphery thereof, including a body (first portion 32 of Fig 6) connected to the panel, a cone part (second part 33) connected to the body (32) having an outer periphery and a neck (15) connected to the cone (33) of the funnel having an electron gun (18 of Fig 1, see lines 25-60 of column 5), wherein the cone has a deflection power reducing shape formed in such a manner that the outer periphery of the cone has a predetermined curvature which is contiguous to the body (lines 35-36 of column 6), and such curvature is along the length (L) of the cone part 33, which includes such shape having length of L/4 from an end of the cone at the neck.

Allowable Subject Matter

Claim 2 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. In the light of specification, it is understood that "5mm" should be 50mm.

Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 2, the prior art of record neither teach nor suggests a CRT including all the claimed limitations of claim 2, particularly the limitation of the arc with a radius satisfying the conditions $|Cz| < 4.5$, and $25\text{ mm} < r1 < 50\text{mm}$, where Cz is a coordinate of a center for the arc in the axis of symmetry direction and r1 is the radius of curvature of the arc.

Regarding claim 3, the prior art of record neither shows nor suggests a CRT including all the claimed limitations of claim 3, particularly the limitation of curvature satisfying the condition $0.26 < R < 0.43$, where R is an average variation of the height for all points on the curvature measured from the axis of symmetry to each point of the curvature.

Other Prior Art Cited

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure : Elfner et al. (US 6353284) ; Sano et al. (US 6384525).

Contact Information

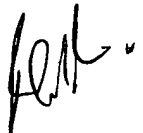
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karabi Guharay whose telephone number is (703) 305-1971. The examiner can normally be reached on Monday-Friday 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (703) 305-4794. The fax phone number for the organization is (703) 308-7382.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

R. G.
Karabi Guharay
Patent Examiner
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